

RECEIVED
CENTRAL FAX CENTER

005/018

JUL 10 2006

Patent
ATTORNEY DOCKET NO.: 19308.0026U1
APPLICATION NO.: 10/725,767
03SKY0028
Page 2 of 15

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the above-referenced application:

1 1. (Currently amended) A method for filtering a received signal in a
2 wireless receiver, comprising:
3 providing a received signal to an amplifier; and
4 inverting the impedance of the received signal using an inductance applied at the
5 output of the amplifier using an inductance without interfering with the function of the
6 amplifier.

1 2. (Original) The method of claim 1, further comprising inverting the
2 impedance of the received signal at the output of the amplifier using a voltage
3 controlled current source to transform the inductance applied to the received signal to a
4 capacitance.

1 3. (Original) The method of claim 2, further comprising implementing
2 the voltage controlled current source as a pair of transconductance amplifiers.

1 4. (Original) The method of claim 3, further comprising implementing
2 the inductance at the output of the amplifier using a pair of voltage controlled current
3 sources and a capacitance.

Patent
ATTORNEY DOCKET NO.: 19308.0026U1
APPLICATION NO.: 10/725,767
03SKY0028
Page 3 of 15

1 5. (Currently amended) A low-noise filter for a wireless receiver,
2 comprising:
3 an amplifier; and
4 an impedance inverter applied at the output of the amplifier and configured to
5 transform inductance applied to a received signal to a capacitance without interfering
6 with the function of the amplifier.

1 6. (Currently amended) The low-noise filter of claim 5, wherein the
2 ~~impedance inverter~~ filter further comprises an ~~inductor coupled to the output~~ open
3 circuit between the impedance inverter and an input of the amplifier.

1 7. (Original) The low-noise filter of claim 6, wherein the impedance
2 inverter further comprises:
3 a pair of transconductance amplifiers; and
4 at least one capacitance coupled to the output of one of the transconductance
5 amplifiers.

1 8. (Original) The low-noise filter of claim 7, wherein the impedance
2 inverter removes direct current (DC) offset present at the input of the amplifier.

Patent
ATTORNEY DOCKET NO.: 19308.0026U1
APPLICATION NO.: 10/725,767
03SKY0028
Page 4 of 15

1 9. (Currently amended) A portable transceiver, comprising:
2 a modulator configured to receive and modulate a data signal;
3 an upconverter configured to receive the modulated data signal and provide a
4 radio frequency (RF) signal;
5 a transmitter configured to transmit the RF signal; and
6 a direct conversion receiver including an amplifier, a filter and an impedance
7 inverter configured to transform inductance applied to a received signal to a
8 capacitance, wherein the impedance inverter is applied at an output of the amplifier such
9 that an open circuit exists between the impedance inverter and an input of the amplifier.

1 10. (Original) The portable transceiver of claim 9, wherein the
2 impedance inverter further comprises an inductor coupled to the output of the amplifier.

1 11. (Original) The portable transceiver of claim 10, wherein the
2 impedance inverter further comprises:
3 a pair of transconductance amplifiers; and
4 at least one capacitance coupled to the output of one of the transconductance
5 amplifiers.

1 12. (Original) The portable transceiver of claim 11, wherein the
2 impedance inverter removes direct current (DC) offset present at the input of the
3 amplifier.

Patent
ATTORNEY DOCKET NO.: 19308.0026U1
APPLICATION NO.: 10/725,767
03SKY0028
Page 5 of 15

1 13. (Currently amended) A portable transceiver, comprising:
2 means for modulating a data signal;
3 means for upconverting the modulated data signal and provide a radio frequency
4 (RF) signal;
5 means for transmitting the RF signal;
6 means for converting a received signal to a baseband signal;
7 means for amplifying the baseband signal; and
8 means for inverting the impedance of the received signal at the output of the
9 amplifying means to transform inductance applied to a received signal to a capacitance,
10 wherein the means for inverting impedance of the received signal does not affect the
11 means for amplifying the baseband signal.

1 14. (Original) The portable transceiver of claim 13, further comprising
2 voltage controlled current source means for inverting the impedance of the received
3 signal at the output of the amplifier to transform the inductance applied to the received
4 signal to a capacitance.

1 15. (Currently amended) A system for removing direct current (DC) offset
2 from a received signal, comprising:
3 a variable gain amplifier configured to ~~proves~~ amplify a received radio
4 frequency (RF) signal; and
5 a gyrator-generated inductance applied at the output of the variable gain
6 amplifier, the gyrator-generated inductance configured to transform inductance present
7 at the output of the variable gain amplifier to a capacitance without interfering with the
8 function of the variable gain amplifier.

Patent
ATTORNEY DOCKET NO.: 19308.0026U1
APPLICATION NO.: 10/725,767
03SKY0028
Page 6 of 15

1 16. (Original) The system of claim 15, wherein the gyrator-generated
2 inductance adds a high pass filter pole to the variable gain amplifier.

1 17. (Original) The system of claim 15, wherein the gyrator-generated
2 inductance shunts excess DC current present at the output of the variable gain amplifier
3 to ground.

1 18. (Original) The system of claim 15, wherein, at a frequency above a
2 high-pass cutoff frequency, the gyrator-generated inductance appears as a high
3 impedance at the output of the variable gain amplifier.